

January 12, 2010

DRC BOARD MEETING

**Department of
Environmental Quality**

168 N 1950 W

DEQ BLDG #2

Conference Room 101

SALT LAKE CITY, UT

84114-4850

3:00 p.m. – 5:00 p.m.

RADIATION CONTROL BOARD
Department of Environmental Quality (Bldg #2),
Conference Room 101, 168 North 1950 West, Salt Lake City, Utah
3:00 – 5:00 P.M., January 12, 2010

FINAL AGENDA

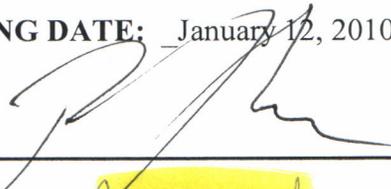
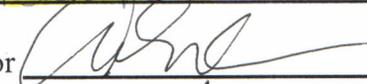
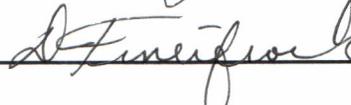
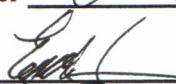
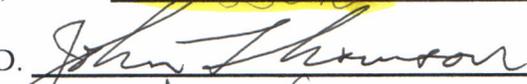
- I. Minutes (**Board Action Item**)
 - a. Approval of the Minutes from the December 8, 2009 Board Meeting
- II. Rules
 - a. Request to Extend Public Comment Period for R313-25-8, Depleted Uranium Rule (**Board Action Item**)
 - b. Proposed Rule to Prohibit Blended Wastes (**Board Action Item**)
 - c. Presentation on Waste Blending by *EnergySolutions* (**Board Information Item**)
- III. Radioactive Materials Licensing/Inspection
No Items
- IV. X-Ray Registration/Inspection
No Items
- V. Radioactive Waste Disposal
 - a. Update: Amendment to *EnergySolutions* License – License Condition 35. (**Board Information Item**)
 - b. Governor's and DOE Agreement on DU Disposal (**Board Information Item**)
- VI. Uranium Mill Licensing and Inspection
No Items
- VII. Other Division Issues
 - a. Quarterly and Monthly Update (**Board Information Item**)
- VIII. Public Comment
- IX. **The Next Scheduled Board Meeting: February 9, 2010 (Tuesday)**, DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah 3:00 – 5:00 P.M.

For those individuals needing special assistance in accordance with the Americans with Disabilities Act, please contact Brooke Baker at the Utah Department of Environmental Quality, at 168 North 1950 West, Salt Lake City, UT 84116, Office of Human Resources at (801) 536-4412, TDD (801) 536-4414, or by email at: bbaker@utah.gov.

UTAH RADIATION BOARD

BOARD MEMBERS - SIGN-IN SHEET

MEETING DATE: January 12, 2010

- Peter A. Jenkins, M.S., CHP, Chair 
- Elizabeth Goryunova, M.S., Vice Chair Absent
- Aminda Smith
~~William J. Sinclair~~, Acting, Executive Director 
- Dane L. Finerfrock, Exec. Sec. 
- Scott Bird Absent
- Patrick D. Cone 
- Frank D. DeRosso, MSPH, CIH Absent
- Christian K. Gardner 
- Edd C. Johnson 
- Douglas S. Kimball, DMD 
- Joseph K. Miner, M.D., MSPH Absent
- John W. Thomson, M.D. 
- David A. Tripp, PH.D. 
- COLLEEN JOHNSON. Colleen Johnson

OTHER STAFF ATTENDING

Boyd, David Esser, John Hultquist, Craig Jones
Loren Marton, Phil Goble, Donna Spangler
Ryan Johnson, Kevin Carney, Laura Lockhart

Public Attendance Sheet
Utah Radiation Control
Board Meeting
 DEQ Bldg. #2, Conf. Room 101
 168 N 1950 W, Salt Lake City, UT 84114-4850
 3:00 - 5:00 p.m.
 January 12, 2010
Please Print

NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
1. Joe Di Camillo	Stu dsuik	yes - 2 B Blendage
2. Randy Horak	"	" "
3. BOB ARCHIBALD	4115 QUARANTER SANDY 84092 B.ABLECSBGLOBAL.NET	NO
4. Mary Elizabeth AVAS	Sandy 84092 menard@SBGLOBAL.NET	No
5. James O'Neal	private citizen iscanyakira@yahoo.com	yes - II b.
6. Kimi Barnett	Salt Lake County	no
7. George Gates	HEAL	no
8. K. Albany	HEAL	No
9. Humberto Willette	GOPB	no
10. Cherry Wong	Heal	NO
11. Bryan Melchior	private citizen	no
12. Steve Nelson	citizen	yes II A
13. Tim Gillie	Toche Transcript Bulletin	no
14. Ed Firmage	self	Yes
15. Christopher Thomas	HEAL	yes II & V
16. Vanessa Pierce	HEAL	NO
17. Kelsa Bowers	concerned citizen	no
18. Sherry Mier	concerned citizen	no
19. Jean Sweet	Gallatin West	

Public Attendance Sheet

Utah Radiation Control

Board Meeting

DEQ Bldg. #2, Conf. Room 101

168 N 1950 W, Salt Lake City, UT 84114-4850

3:00 – 5:00 p.m.

January 12, 2010

Please Print

NAME (Please Print)	Organization/Affiliation: Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
20. Helene Cuomo	self	Yes
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NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
39. <i>George Chapman</i>	<i>gechapman@yahoo.com</i> <i>Salt Lake City, 8555 Spring View Dr</i> <i>501-801-867-7071</i>	<i>Yes general comment</i> <i>need more staff</i>
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58. David Esser	DRC	No
59. Dan Shim	Energy Solutions	No
60. Tom Majette	Energy Solutions	No
61. Clare Gilmore	HEAL Utah	No
62. SA Kelly Nikols		YES
63. Robert Baird	URS Corp	No
64. ARTHUR MORRIS	HEAL	No
65. Steve Erickson	Cit Education Project	yes
66. Steve ERICKSON		
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96. MAXINE KAUSER	Heal Utah water	No
97. See Corth	"	No
98. Patrick vander Hofstad	pvdhofstad@gmail.com 801-657-2247 son	No
99. Judy Lord	bookcat@hotmail.com 801-486-6694	No
100. Cynthia offthedesert	cynthearm@gmail.com HEAL UT	?
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RADIATION CONTROL BOARD
Department of Environmental Quality (Bldg #2),
Conference Room 101, 168 North 1950 West, Salt Lake City, Utah
3:00 – 5:00 P.M., January 12, 2010

TENTATIVE AGENDA

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No Items

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No Items

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- VI. Uranium Mill Licensing and Inspection
No Items

- VII. Other Division Issues
 - a. Quarterly and Monthly Update (**Board Information Item**)

- VIII. Public Comment

- IX. **The Next Scheduled Board Meeting: February 9, 2010 (Tuesday)**, DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah 3:00 – 5:00 P.M.

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1	<p>I. Minutes (Board Action Item)</p> <p>a. Approval of the Minutes from the December 8, 2009 Board Meeting</p>
2	<p>II. Rules</p> <p>a. Request to Extend Public Comment Period for R313-25-8, Depleted Uranium Rule (Board Action Item)</p> <p>b.. Proposed Rule to Prohibit Blended Wastes (Board Info Item)</p> <p>c. Presentation on Waste Blending by EnergySolutions (Board Info Item)</p>
3	<p>III. Radioactive Materials Licensing/ Inspection</p> <p>No Items</p>
4	<p>IV. X-Ray Registration/Inspection</p> <p>No Items</p>
5	<p>V. Radioactive Waste Disposal</p> <p>a. Update: Amendment to EnergySolutions License – License Condition 35. (Board Info Item)</p> <p>b. Governor’s and DOE Agreement on DU Disposal (Board Info Item)</p>
6	<p>VI. Uranium Mill Licensing and Inspection</p> <p>No Items</p>
7	<p>VII. Other Division Issues (Board Info Item)</p> <p>a. Division Activities Report</p> <p>VIII. Public Comment</p>
8	<p>IX. Other Issues:</p> <p>The Next Scheduled Board Meeting: February 9, 2010 (Tuesday), DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah, 3:00 – 5:00 P.M.</p>

- I. Minutes (Board Action Item)**
 - a. Approval of the Minutes from the December 8, 2009 Board Meeting**

MINUTES
OF
THE UTAH RADIATION CONTROL BOARD

December 8, 2009

Department of Environmental Quality, DEQ Building #2

Conference Room 101

168 N 1950 W

Salt Lake City, Utah 84114-4850

BOARD MEMBERS PRESENT

Peter A. Jenkins, M.S., CHP, Chair
Elizabeth Goryunova, M.S., Vice Chair
Dane L. Finerfrock, Executive Secretary
Scott Bird
Patrick D. Cone (Attended by Conf. Call)
Frank D. DeRosso, MSPH, CIH
Christian K. Gardner
Douglas S. Kimball, DMD
Joseph K. Miner, M.D., MSPH
Amanda Smith, DEQ Executive Director
John W. Thomson, M.D.
David A. Tripp, Ph.D.

PUBLIC

Attachment: Public Attendance List

BOARD MEMBERS ABSENT/EXCUSED

Colleen Johnson
Edd Johnson

**DRC STAFF/OTHER DEQ MEMBERS
PRESENT**

David Esser, DRC Staff
Phil Goble, DRC Staff
John Hultquist, DRC Section Manager
Craig Jones, DRC Section Manager
Laura Lockhart, Attorney, Atty General's Office
Yoli Necochea, DRC Staff
Fred Nelson, Attorney, Atty General's Office
Loren Morton, DRC Section Manager
Brad Johnson, Deputy Director for DEQ
Donna Spangler, PIO, DEQ – PPA Staff

GREETINGS/MEETING CALLED TO ORDER

Peter A. Jenkins, Chairman, called the board meeting to order at 3:00 p.m. and welcomed the board members and the public. He indicated that if the public wished to address any items on the agenda, they should sign the public, sign-in sheet. Those desiring to comment would be given an opportunity to address their concerns during the comment period.

I. APPROVAL OF MINUTES (Board Action Item)

a. Approval of the Minutes from the November 10, 2009 Board Meeting

Peter A. Jenkins, Chairman, asked the board members if they had any corrections to the minutes from November 13, 2009.

Elizabeth Goryunova requested the following corrections to the minutes:

1. Page 4., Item V. a., third paragraph, sixth sentence, company name which reads: "**EnergSolutions** argued that the Executive Secretary had the final approval, . . ." Corrected to read: "**EnergySolutions** . . ."
2. Page 11, Item V. b., forth paragraph, last name which reads: "Chairman Jenkins asked for volunteers from the subcommittee, they were: "(1) Elizabeth **Goryunovo**, . . ." Corrected to read: "(1) Elizabeth **Goryunova** . . ."

MOTION MADE BY ELIZABETH GORYUNOVA TO APPROVE THE MINUTES OF NOVEMBER 10, 2009 WITH THE REQUESTED CORRECTIONS

MOTION SECONDED BY DAVID A. TRIPP

MOTION CARRIED AND PASSED UNANIMOUSLY

II. RULES

No Items

III. RADIOACTIVE MATERIALS LICENSING/INSPECTION

No Items

IV. X-RAY REGISTRATION/INSPECTION

No Items

V. Radioactive Waste Disposal

- a. Update: Amendment to EnergySolutions License – License Condition 35. (Board Information Item)**

John Hultquist, Section Manager, informed the Board that license

condition 35 had gone out for public comment on November 23, 2009. Mr. Hultquist said that the Division would be accepting written comments, until the close of business on December 23, 2009. He said that the Division had not received any written comments regarding license condition 35. He asked the Board whether they had any questions.

Questions by the Board:

Patrick D. Cone asked what the time-line would be for the public comment period.

John Hultquist, Section Manager, responded that the public comment period began on November 23, 2009 and would end at the close of business on December 23, 2009. He said that the public notice was currently posted on the DRC's web page. The proposed changes to license condition 35 were also available on the DRC's web page.

**b. Consideration of Rule for Depleted Uranium Disposal
(Board Action Item)**

Chairman Jenkins asked Laura Lockhart, from the Attorney General's Office, to come forward and report to the Board on the legal issues surrounding the rule on Depleted Uranium. Ms. Lockhart went over each section on the proposed rule. The sections she discussed were: (1) Regulatory and Factual Background; (2) Summary of Preliminary Bases for Actions; (3) Impacts of Rulemaking; (4) Additional Documentation; (5) Statement Regarding Utah Code Annotated §19-3-104; and (6) the Proposed Rule.

DISCUSSION BY THE BOARD:

Peter A. Jenkins, Chairman, asked Patrick D. Cone to report on the progress of the subcommittee, and the discussion's they had, had on DU. Patrick D. Cone reported that the subcommittee met with John Hultquist, DRC Section Manager, and other DRC staff, and they discussed the proposed Administrative Rule for DU disposal.

Mr. Cone said he wanted to know where the "10,000 year time-frame for DU disposal" had come from. He said the "DU 10,000 year, containment time-frame" should be discussed further by the Board. Mr. Cone said he would like to know, if 10,000 years would be an adequate containment. He said that he would like the Board to discuss the geologic processes of infiltration at the site. The site will conceivably need to account for inundation from water—in case anything like Lake Bonneville happened again.

Peter A. Jenkins, Chairman, said that the purpose of today's board meeting would be to send the proposed, draft rule out for public comment. The

public-comment period would allow interested parties and people who have expertise in DU disposal to make comment.

David A. Tripp referred back to the rule. He said that it read "a minimum of 10,000 years." He said the question is being asked "is the minimum of 10,000 years" an appropriate time. Dr. Tripp said that he did feel it was appropriate.

Chairman Jenkins said that the sentence read: "any such performance assessment shall be revised as needed to reflect on-going guidance and rulemaking from the NRC." He said Mr. Cone asked where the "10,000 year time-frame" came from. Chairman Jenkins said it came from the SECY document. He said the rule captures an on-going guidance and rulemaking from the U.S. Nuclear Regulatory Commission (NRC).

Discussion by the Board followed. Some of the issues the board members discussed on license condition 35 were: (1) the qualitative analysis for the time-period where peak-dose occurs--whether it was definitive enough; (2) the protection of inadvertent intruders; (3) Lake Bonneville, and if they had actually modeled the radioactive-site as if it were underwater; and (4) whether they should discuss the infiltration question.

Dane Finerfrock, Executive Secretary, responded to the Board members questions and concerns on license condition 35. The Board continued discussing the changes they wanted on the license.

Peter A. Jenkins, Chairman, invited the public to make comments on this item.

PUBLIC COMMENTS:

James O'Neal, Concerned Citizen from Provo, Utah:

Mr. O'Neal said he would like to thank the Board for the good job they do, and said he would like to reserve his public comments for the end of the meeting.

Christopher Thomas, HEAL-Utah:

Christopher Thomas said that he would like to thank the Board, because the issues they had been dealing with were very complicated. He said that HEAL-Utah did have written comments that would be submitted, and that they would be consulting experts in the field to suggest reasons for improving the rule in certain ways. Mr. Thomas said that he hoped that the Board would move forward and send the rule out for the public comment.

Mr. Thomas said that looking at the statement of basis (even though it was 19 pages), the description was surprisingly clear and concise. It included

the technical, regulatory and legal issues that they had been discussing. Mr. Thomas said that after reading the document, it left him with only one conclusion: the State of Utah was well within its rights to move forward, and to plug the hole that had been left at the Federal level.

Mr. Thomas said that regarding the time-period issue, the NRC talked about "a minimum of 10,000 years," but they also said that additional analysis should be performed to include the time of peak impact. If those impacts were significantly greater than the impacts of 10,000 years, then they should be taken into account. He said that during the inadvertent-intruder remarks, he had one thing to add, and that was that EnergySolutions analyzed why they did not need to look at an inadvertent intruder site scenario. Mr. Thomas said that it was the Executive Secretary's job to look at all the scenarios, but that he was sure that the inadvertent intruder analysis was not included. He said that he felt that it was very important that this type of analysis be looked at, prior to going forward.

Mr. Thomas said while they talked about one million years and the return of Lake Bonneville, DU heats-up after one-thousand years. He was concerned with someone wandering onto the site and being exposed. They could sue the State for millions of dollars. They could sue, because the State knew it now, today that it was going to be a hazard in the future. He said the State would be the long-term custodian. It was important that they accounted for inadvertent intruders, prior to passing the rule.

Michael Cowley, Concerned Citizen:

Michael Cowley thanked the Board for their involvement on this issue and how they were dealing with the real questions about the variability of the site--and what could happen to it. Mr. Cowley said that in retrospect there might be an easier solution to figuring out what to do with the time limit, and that would be to actually require "a full quantitative or a specific model" just for Lake Bonneville's reoccurring cycle. He said if they checked the historic flooding record that had occurred in the basin that future flooding was imminent--it would be occurring more frequently, and it could last longer.

Mr. Cowley said that the official report from the U.S. Geologic Survey, Paper #1370, had looked at the Lake Bonneville Basin when they were looking for a high-level waste repository. They needed to look back over at least a 200,000 year time-period. Mr. Cowley said that they might not know the exact date when the flooding would occur, but in the U.S. Geologic Survey's paper that was published in 1990, the conclusion was that it would certainly flood again.

Ed Firmage, Concerned Citizen:

Ed Firmage said that one thing seemed for sure, there were a lot of imponderables. It is known that DU material is radioactive for a long-period of time—more than the typical 10,000 year modeling period. He said if they could utilize any information from geologic history, it is a useful guide of what can be expected in the future. He said if it is known that 10,000 years is in the low-end of DU's period of risk (both geologically and in radioactive-activity) and to pick that as "your case to put out to the public," it seems to be a misstep from the beginning. Mr. Firmage urged the Board to vote against the proposal; however, he would like to see a ruling completed sooner rather than later. He strongly suggested adopting the reasonable geologic timeframe of 100,000 years for DU disposal.

Charles Judd, Concerned Citizen:

Charles Judd said that he would reserve his comments for the end of the meeting.

Tom Magette, EnergySolutions:

Tom Magette said the time-period being used was contained in NRC's guidance. Mr. Magette clarified that the regulation they were discussing was R15-73, (the NRC's guidance on how to prepare performance assessments). He said that R15-54 was aimed at giving DOE guidance for the West Valley clean-up, which is the most contemporary guidance issued. He said that both rules used the 10,000 year time frame, because it was a reasonable time-frame for deterministic modeling. Mr. Magette said that beyond 10,000 years, it became pure conjecture. "As the Executive Secretary, Dane Finerfrock had said," there are certain things that can be predicted with precision over 1 million years, such as the radio isotopic decay. It was known what would happen to DU material, and some projections could be made. Radon was a decay product--radon has 3.8 half-life. They could project the time it will take for radon gas to move through Clive's disposal site. Projections can be made, as to how the Clive site will change. Scenarios can be considered based on issues that are chosen to hypothesize. Mr. Magette said that there was some rationale for using the one-million-year time-period.

He said that the guidance documents were not ignorant of DU. He said that guidance was specifically directed at uranium. He said both documents did speak specifically to "what would you do if there were uranium in your disposal site and you were worried about a period of performance."

Peter A. Jenkins, Chairman, said that a motion had been made and seconded "to accept the current proposed text and to open a public comment period." Chairman Jenkins asked whether the Board had any further discussion.

DISCUSSION BY THE BOARD:

John W. Thomson said that the point that keeps coming back is the Lake Bonneville issue, and that he had heard the Executive Secretary say this was part of the modeling.

Dane Finerfrock, Executive Secretary, said that this was correct, that it would be part of the modeling.

David A. Tripp said he was still having a difficult time putting together or defining a particular time frame--in this case "10,000 years." He said that when you start talking about real numbers and actual situations, whether it is disintegration-rates or whatever it might be, you can actually put a particular number, a numerical number to it. However, they were trying to put a numerical value that they neither had a great deal clarity for, nor a reasonable time-frame for.

MOTION MADE BY FRANK D. DEROSSO FOR THE BOARD TO SEND THE DRAFT RULE OUT FOR PUBLIC COMMENT

SECONDED BY DOUGLAS S. KIMBALL

The Board Members voted on this action as follows:

Scott Bird – Yes
Patrick D. Cone – Yes
Frank DeRosso – Yes
Christian K. Gardner – Yes
Peter A. Jenkins - Abstention
Elizabeth Goryunova – Yes
Douglas S. Kimball – Yes
Amanda Smith – Yes
David A. Tripp - Yes
John W. Thomson - Yes

Vote: 9 Yes's; and 1 Abstention

MOTION CARRIED AND PASSED

DISCUSSION ON THE MOTION BY THE BOARD:

Peter A. Jenkins said that the Board would discuss the time period for the draft rule to go out for public comment.

Discussion followed by Board members regarding sending the draft rule out for 30, 45, or for a 60 day public comment period.

Chairman Jenkins asked Dane Finerfrock which time period would be best for the Division to finalize the comments and present them to the Board.

Dane Finerfrock, Executive Secretary, responded that that it did not matter to the staff whether it was 30 or 60 days--they could still present the final rule to Board.

After much discussion, the Board made the following motion:

“FRIENDLY AMENDMENT” MADE BY DAVID A. TRIPP TO THE ORIGINAL MOTION: HE MOTIONED THAT THE DIVISION PRESENT THE RESULTS OF THE PUBLIC COMMENTS IN AN ADDITIONAL 30-DAYS HENCE, AT THE FEBRUARY 2010 BOARD MEETING

SECONDED BY ELIZABETH GORYUNOVA

THE FRIENDLY AMENDMENT, CARRIED AND PASSED UNANIMOUSLY

MOTION MADE BY PATRICK D. CONE TO SEND THE DRAFT RULE OUT FOR A 30-DAY PUBLIC COMMENT PERIOD

SECONDED BY JOHN W. THOMSON

MOTION CARRIED AND PASSED UNANIMOUSLY

VI. URANIUM MILL LICENSING AND INSPECTION

No Items

VII. OTHER DIVISION ISSUES

a. Division Activities Report – Three Board Information Items

Peter A. Jenkins, Chairman, asked the Board if they had any questions. The board members had none.

b. Status of License Condition 35 and the Proposed Rule – DEQ’s Response to Frank Marcinowski, DOE

Amanda Smith, DEQ Executive Director, reported on this item. She said that the Department had been contacted by Frank Marcinowski from the Department of Energy (DOE). He requested that the Department respond to him in a letter, and outline the status of the license condition and the proposed rule. Ms. Smith said that the Department had responded to Mr. Marcinowski. She said the board members could request a copy by email

or by contacting her office, and her staff would be happy to distribute the letter to them.

Dane Finerfrock, Executive Secretary, reported that Amanda Smith had asked him to contact Frank Marcinowski., DOE. Mr. Finerfrock said he contacted Mr. Marcinowski on December 7, 2009 and he said that DOE was still considering the issue. Mr. Finerfrock said that Mr. Marcinowski had mentioned that Representative Matheson's staff, DOE's staff, and management had met twice last week and were still working through the DU issue.

PUBLIC COMMENTS:

Christopher Thomas, HEAL-Utah

Christopher Thomas, HEAL-Utah, had additional comments on DU disposal in Utah. He said from HEAL-Utah's perspective, a letter from the Board would make a huge difference. He said that DOE was awaiting a lot of things, and thinking about DU's disposal in Utah. He had "gotten the sense" that they had not heard anything from the State of Utah--an official request that would lead them to not send DU waste to Utah. He said that any additional action from the Board on the foreign waste issue (the Board had a lot of power just in writing a letter) would make a "huge difference" in everything that comes from the DOE. The letter would say "hey, hang-on!" Mr. Thomas strongly felt that the DOE should "hang-on," and wait to hear from the State of Utah. Mr. Thomas said that a letter would serve in the State's interest in terms of making sure the State can "protect her citizens' public health, public safety and the environment."

"Holding DU disposal for rule-making" would ultimately protect the long-term interests of the DOE. The DOE's DU material could go to an appropriate site, where they would not have clean-up and removal after the fact. Mr. Thomas said that the State of Utah would be providing DOE with a huge service (in delaying DU disposal)--because a lot of DU material comes to the State of Utah. The DU issue is whether the material that would be coming to Utah was appropriate—he said that the verdict was still out. He said that the Board had acted wisely in requiring further site-analysis. For whatever reasons, if the Board could not send a letter, individual phone calls from board members to Mr. Frank Marcinowski would make a "huge-difference."

DISCUSSION BY THE BOARD:

Peter A. Jenkins, Chairman, asked for advice from legal council. Fred Nelson, Attorney, responded that until the text of the letter were looked at that he could not give the Board a definitive answer. Mr. Nelson said the proposal was to simply make a request, but that under the "Open Meetings Act" that the Board could not do it today. He said that if the Board decided to go forward with making the request that they would have to

prepare a draft (or the staff would prepare a draft) to be considered at the next meeting--where everyone would have a chance to look at it and comment on it. Mr. Nelson said that the Board did have policy making authority, and could issue a request from an annuity. He said that if the Board decided to go forward, the staff would have to draft a document that they could all look at, and then present it at the January 2010 board meeting.

David A. Tripp said that Christopher Thomas had suggested that the board members' write a letter to Frank Marcinowski, DOE. He felt this would be out-of-line for board members to do this.

Chairman Jenkins said that the Board had, had this discussion before where board members' had expressed their personal opinions as citizens vs. using their positions as board members. Chairman Jenkins said that this would be something the Board should be cautioned against.

PUBLIC COMMENTS - CONTINUED:

Charles Judd, Concerned Citizen:

Charles Judd said that he did not understand how the DU waste that was coming to Utah would be handled and whether it would be handled in accordance with the old license. Mr. Judd asked whether it was known that if the waste that would be coming into Utah in the next few weeks, if EnergySolutions would be following the rules under the new License Condition 35, or if they would be handling the waste under the current license.

Peter A. Jenkins asked Mr. Judd if his question was "when would License Condition 35 be effective." Mr. Judd responded, yes, that this was his question. Chairman Jenkins asked Dane Finerfrock to respond to Mr. Judd's question.

Dane Finerfrock responded that License Condition 35 could become effective no sooner than December 23, 2009. The Division would be receiving public comments and would be reviewing the comments to see if there were issues that would have to be addressed. If there were issues, then the Board would have to change the License Condition before making it final.

VIII. PUBLIC COMMENT

Please refer to Item V. b. and VII. b.

IX. The Next Scheduled Board Meeting: January 12, 2009 (Tuesday), DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah 3:00 – 5:00 P.M. THE BOARD MEETING ADJOURNED AT 4:50 P.M.

MINUTES
OF
THE UTAH RADIATION CONTROL BOARD

December 8, 2009

Department of Environmental Quality, DEQ Building #2

Conference Room 101

168 N 1950 W

Salt Lake City, Utah 84114-4850

BOARD MEMBERS PRESENT

Peter A. Jenkins, M.S., CHP, Chair
Elizabeth Goryunova, M.S., Vice Chair
Dane L. Finerfrock, Executive Secretary
Scott Bird
Patrick D. Cone (Attended by Conf. Call)
Frank D. DeRosso, MSPH, CIH
Christian K. Gardner
Douglas S. Kimball, DMD
Joseph K. Miner, M.D., MSPH
Amanda Smith, DEQ Executive Director
John W. Thomson, M.D.
David A. Tripp, Ph.D.

PUBLIC

Attachment: Public Attendance List

BOARD MEMBERS ABSENT/EXCUSED

Colleen Johnson
Edd Johnson

DRC STAFF/OTHER DEQ MEMBERS
PRESENT

David Esser, DRC Staff
Phil Goble, DRC Staff
John Hultquist, DRC Section Manager
Craig Jones, DRC Section Manager
Laura Lockhart, Attorney, Atty General's Office
Yoli Necochea, DRC Staff
Fred Nelson, Attorney, Atty General's Office
Loren Morton, DRC Section Manager
Brad Johnson, Deputy Director for DEQ
Donna Spangler, PIO, DEQ – PPA Staff

GREETINGS/MEETING CALLED TO ORDER

Peter A. Jenkins, Chairman, called the board meeting to order at 3:00 p.m. and welcomed the board members and the public. He indicated that if the public wished to address any items on the agenda, they should sign the public, sign-in sheet. Those desiring to comment would be given an opportunity to address their concerns during the comment period.

I. APPROVAL OF MINUTES (Board Action Item)

a. Approval of the Minutes from the November 10, 2009 Board Meeting

Peter A. Jenkins, Chairman, asked the board members if they had any corrections to the minutes from November 13, 2009.

Elizabeth Goryunova requested the following corrections to the minutes:

1. Page 4., Item V. a., third paragraph, sixth sentence, company name which reads: “**EnergSolutions** argued that the Executive Secretary had the final approval, . . .” Corrected to read: “**EnergySolutions** . . .”
2. Page 11, Item V. b., forth paragraph, last name which reads: “Chairman Jenkins asked for volunteers from the subcommittee, they were: “(1) Elizabeth Goryunovo, . . .” Corrected to read: “(1) Elizabeth Goryunova . . .”

MOTION MADE BY ELIZABETH GORYUNOVA TO APPROVE THE MINUTES OF NOVEMBER 10, 2009 WITH THE REQUESTED CORRECTIONS

MOTION SECONDED BY DAVID A. TRIPP

MOTION CARRIED AND PASSED UNANIMOUSLY

**II. RULES
No Items**

**III. RADIOACTIVE MATERIALS LICENSING/INSPECTION
No Items**

**IV. X-RAY REGISTRATION/INSPECTION
No Items**

V. Radioactive Waste Disposal

a. Update: Amendment to EnergySolutions License – License Condition 35. (Board Information Item)

John Hultquist, Section Manager, informed the Board that license

condition 35 had gone out for public comment on November 23, 2009. Mr. Hultquist said that the Division would be accepting written comments, until the close of business on December 23, 2009. He said that the Division had not received any written comments regarding license condition 35. He asked the Board whether they had any questions.

Questions by the Board:

Patrick D. Cone asked what the time-line would be for the public comment period.

John Hultquist, Section Manager, responded that the public comment period began on November 23, 2009 and would end at the close of business on December 23, 2009. He said that the public notice was currently posted on the DRC's web page. The proposed changes to license condition 35 were also available on the DRC's web page.

**b. Consideration of Rule for Depleted Uranium Disposal
(Board Action Item)**

Chairman Jenkins asked Laura Lockhart, from the Attorney General's Office, to come forward and report to the Board on the legal issues surrounding the rule on Depleted Uranium. Ms. Lockhart went over each section on the proposed rule. The sections she discussed were: (1) Regulatory and Factual Background; (2) Summary of Preliminary Bases for Actions; (3) Impacts of Rulemaking; (4) Additional Documentation; (5) Statement Regarding Utah Code Annotated §19-3-104; and (6) the Proposed Rule.

DISCUSSION BY THE BOARD:

Peter A. Jenkins, Chairman, asked Patrick D. Cone to report on the progress of the subcommittee, and the discussion's they had, had on DU. Patrick D. Cone reported that the subcommittee met with John Hultquist, DRC Section Manager, and other DRC staff, and they discussed the proposed Administrative Rule for DU disposal.

Mr. Cone said he wanted to know where the "10,000 year time-frame for DU disposal" had come from. He said the "DU 10,000 year, containment time-frame" should be discussed further by the Board. Mr. Cone said he would like to know, if 10,000 years would be an adequate containment. He said that he would like the Board to discuss the geologic processes of infiltration at the site. The site will conceivably need to account for inundation from water—in case anything like Lake Bonneville happened again.

Peter A. Jenkins, Chairman, said that the purpose of today's board meeting would be to send the proposed, draft rule out for public comment. The

public-comment period would allow interested parties and people who have expertise in DU disposal to make comment.

David A. Tripp referred back to the rule. He said that it read "a minimum of 10,000 years." He said the question is being asked "is the minimum of 10,000 years" an appropriate time. Dr. Tripp said that he did feel it was appropriate.

Chairman Jenkins said that the sentence read: "any such performance assessment shall be revised as needed to reflect on-going guidance and rulemaking from the NRC." He said Mr. Cone asked where the "10,000 year time-frame" came from. Chairman Jenkins said it came from the SECY document. He said the rule captures an on-going guidance and rulemaking from the U.S. Nuclear Regulatory Commission (NRC).

Discussion by the Board followed. Some of the issues the board members discussed on license condition 35 were: (1) the qualitative analysis for the time-period where peak-dose occurs--whether it was definitive enough; (2) the protection of inadvertent intruders; (3) Lake Bonneville, and if they had actually modeled the radioactive-site as if it were underwater; and (4) whether they should discuss the infiltration question.

Dane Finerfrock, Executive Secretary, responded to the Board members questions and concerns on license condition 35. The Board continued discussing the changes they wanted on the license.

Peter A. Jenkins, Chairman, invited the public to make comments on this item.

PUBLIC COMMENTS:

James O'Neal, Concerned Citizen from Provo, Utah:

Mr. O'Neal said he would like to thank the Board for the good job they do, and said he would like to reserve his public comments for the end of the meeting.

Christopher Thomas, HEAL-Utah:

Christopher Thomas said that he would like to thank the Board, because the issues they had been dealing with were very complicated. He said that HEAL-Utah did have written comments that would be submitted, and that they would be consulting experts in the field to suggest reasons for improving the rule in certain ways. Mr. Thomas said that he hoped that the Board would move forward and send the rule out for the public comment.

Mr. Thomas said that looking at the statement of basis (even though it was 19 pages), the description was surprisingly clear and concise. It included

the technical, regulatory and legal issues that they had been discussing. Mr. Thomas said that after reading the document, it left him with only one conclusion: the State of Utah was well within its rights to move forward, and to plug the hole that had been left at the Federal level.

Mr. Thomas said that regarding the time-period issue, the NRC talked about "a minimum of 10,000 years," but they also said that additional analysis should be performed to include the time of peak impact. If those impacts were significantly greater than the impacts of 10,000 years, then they should be taken into account. He said that during the inadvertent-intruder remarks, he had one thing to add, and that was that EnergySolutions analyzed why they did not need to look at an inadvertent intruder site scenario. Mr. Thomas said that it was the Executive Secretary's job to look at all the scenarios, but that he was sure that the inadvertent intruder analysis was not included. He said that he felt that it was very important that this type of analysis be looked at, prior to going forward.

Mr. Thomas said while they talked about one million years and the return of Lake Bonneville, DU heats-up after one-thousand years. He was concerned with someone wandering onto the site and being exposed. They could sue the State for millions of dollars. They could sue, because the State knew it now, today that it was going to be a hazard in the future. He said the State would be the long-term custodian. It was important that they accounted for inadvertent intruders, prior to passing the rule.

Michael Cowley, Concerned Citizen:

Michael Cowley thanked the Board for their involvement on this issue and how they were dealing with the real questions about the variability of the site--and what could happen to it. Mr. Cowley said that in retrospect there might be an easier solution to figuring out what to do with the time limit, and that would be to actually require "a full quantitative or a specific model" just for Lake Bonneville's reoccurring cycle. He said if they checked the historic flooding record that had occurred in the basin that future flooding was imminent--it would be occurring more frequently, and it could last longer.

Mr. Cowley said that the official report from the U.S. Geologic Survey, Paper #1370, had looked at the Lake Bonneville Basin when they were looking for a high-level waste repository. They needed to look back over at least a 200,000 year time-period. Mr. Cowley said that they might not know the exact date when the flooding would occur, but in the U.S. Geologic Survey's paper that was published in 1990, the conclusion was that it would certainly flood again.

Ed Firmage, Concerned Citizen:

Ed Firmage said that one thing seemed for sure, there were a lot of imponderables. It is known that DU material is radioactive for a long-period of time—more than the typical 10,000 year modeling period. He said if they could utilize any information from geologic history, it is a useful guide of what can be expected in the future. He said if it is known that 10,000 years is in the low-end of DU's period of risk (both geologically and in radioactive-activity) and to pick that as "your case to put out to the public," it seems to be a misstep from the beginning. Mr. Firmage urged the Board to vote against the proposal; however, he would like to see a ruling completed sooner rather than later. He strongly suggested adopting the reasonable geologic timeframe of 100,000 years for DU disposal.

Charles Judd, Concerned Citizen:

Charles Judd said that he would reserve his comments for the end of the meeting.

Tom Magette, EnergySolutions:

Tom Magette said the time-period being used was contained in NRC's guidance. Mr. Magette clarified that the regulation they were discussing was R15-73, (the NRC's guidance on how to prepare performance assessments). He said that R15-54 was aimed at giving DOE guidance for the West Valley clean-up, which is the most contemporary guidance issued. He said that both rules used the 10,000 year time frame, because it was a reasonable time-frame for deterministic modeling. Mr. Magette said that beyond 10,000 years, it became pure conjecture. "As the Executive Secretary, Dane Finerfrock had said," there are certain things that can be predicted with precision over 1 million years, such as the radio isotopic decay. It was known what would happen to DU material, and some projections could be made. Radon was a decay product--radon has 3.8 half-life. They could project the time it will take for radon gas to move through Clive's disposal site. Projections can be made, as to how the Clive site will change. Scenarios can be considered based on issues that are chosen to hypothesize. Mr. Magette said that there was some rational for using the one-million-year time-period.

He said that the guidance documents were not ignorant of DU. He said that guidance was specifically directed at uranium. He said both documents did speak specifically to "what would you do if there were uranium in your disposal site and you were worried about a period of performance."

Peter A. Jenkins, Chairman, said that a motion had been made and seconded "to accept the current proposed text and to open a public comment period." Chairman Jenkins asked whether the Board had any further discussion.

DISCUSSION BY THE BOARD:

John W. Thomson said that the point that keeps coming back is the Lake Bonneville issue, and that he had heard the Executive Secretary say this was part of the modeling.

Dane Finerfrock, Executive Secretary, said that this was correct, that it would be part of the modeling.

David A. Tripp said he was still having a difficult time putting together or defining a particular time frame--in this case "10,000 years." He said that when you start talking about real numbers and actual situations, whether it is desecration-rates or whatever it might be, you can actually put a particular number, a numerical number to it. However, they were trying to put a numerical value that they neither had a great deal clarity for, nor a reasonable time-frame for.

MOTION MADE BY FRANK D. DEROSSO FOR THE BOARD TO SEND THE DRAFT RULE OUT FOR PUBLIC COMMENT

SECONDED BY DOUGLAS S. KIMBALL

The Board Members voted on this action as follows:

Scott Bird – Yes
Patrick D. Cone – Yes
Frank DeRosso – Yes
Christian K. Gardner – Yes
Peter A. Jenkins - Abstention
Elizabeth Goryunova – Yes
Douglas S. Kimball – Yes
Amanda Smith – Yes
David A. Tripp - Yes
John W. Thomson - Yes

Vote: 9 Yes's; and 1 Abstention

MOTION CARRIED AND PASSED

DISCUSSION ON THE MOTION BY THE BOARD:

Peter A. Jenkins said that the Board would discuss the time period for the draft rule to go out for public comment.

Discussion followed by Board members regarding sending the draft rule out for 30, 45, or for a 60 day public comment period.

Chairman Jenkins asked Dane Finerfrock which time period would be best for the Division to finalize the comments and present them to the Board.

Dane Finerfrock, Executive Secretary, responded that that it did not matter to the staff whether it was 30 or 60 days--they could still present the final rule to Board.

After much discussion, the Board made the following motion:

“FRIENDLY AMENDMENT” MADE BY DAVID A. TRIPP TO THE ORIGINAL MOTION: HE MOTIONED THAT THE DIVISION PRESENT THE RESULTS OF THE PUBLIC COMMENTS IN AN ADDITIONAL 30-DAYS HENCE, AT THE FEBRUARY 2010 BOARD MEETING

SECONDED BY ELIZABETH GORYUNOVA

THE FRIENDLY AMENDMENT, CARRIED AND PASSED UNANIMOUSLY

MOTION MADE BY PATRICK D. CONE TO SEND THE DRAFT RULE OUT FOR A 30-DAY PUBLIC COMMENT PERIOD

SECONDED BY JOHN W. THOMSON

MOTION CARRIED AND PASSED UNANIMOUSLY

VI. URANIUM MILL LICENSING AND INSPECTION

No Items

VII. OTHER DIVISION ISSUES

a. Division Activities Report – Three Board Information Items

Peter A. Jenkins, Chairman, asked the Board if they had any questions. The board members had none.

b. Status of License Condition 35 and the Proposed Rule – DEQ’s Response to Frank Marcinowski, DOE

Amanda Smith, DEQ Executive Director, reported on this item. She said that the Department had been contacted by Frank Marcinowski from the Department of Energy (DOE). He requested that the Department respond to him in a letter, and outline the status of the license condition and the proposed rule. Ms. Smith said that the Department had responded to Mr. Marcinowski. She said the board members could request a copy by email

or by contacting her office, and her staff would be happy to distribute the letter to them.

Dane Finerfrock, Executive Secretary, reported that Amanda Smith had asked him to contact Frank Marcinowski., DOE. Mr. Finerfrock said he contacted Mr. Marcinowski on December 7, 2009 and he said that DOE was still considering the issue. Mr. Finerfrock said that Mr. Marcinowski had mentioned that Representative Matheson's staff, DOE's staff, and management had met twice last week and were still working through the DU issue.

PUBLIC COMMENTS:

Christopher Thomas, HEAL-Utah

Christopher Thomas, HEAL-Utah, had additional comments on DU disposal in Utah. He said from HEAL-Utah's perspective, a letter from the Board would make a huge difference. He said that DOE was awaiting a lot of things, and thinking about DU's disposal in Utah. He had "gotten the sense" that they had not heard anything from the State of Utah--an official request that would lead them to not send DU waste to Utah. He said that any additional action from the Board on the foreign waste issue (the Board had a lot of power just in writing a letter) would make a "huge difference" in everything that comes from the DOE. The letter would say "hey, hang-on!" Mr. Thomas strongly felt that the DOE should "hang-on," and wait to hear from the State of Utah. Mr. Thomas said that a letter would serve in the State's interest in terms of making sure the State can "protect her citizens' public health, public safety and the environment."

"Holding DU disposal for rule-making" would ultimately protect the long-term interests of the DOE. The DOE's DU material could go to an appropriate site, where they would not have clean-up and removal after the fact. Mr. Thomas said that the State of Utah would be providing DOE with a huge service (in delaying DU disposal)--because a lot of DU material comes to the State of Utah. The DU issue is whether the material that would be coming to Utah was appropriate—he said that the verdict was still out. He said that the Board had acted wisely in requiring further site-analysis. For whatever reasons, if the Board could not send a letter, individual phone calls from board members to Mr. Frank Marcinowski would make a "huge-difference."

DISCUSSION BY THE BOARD:

Peter A. Jenkins, Chairman, asked for advice from legal council. Fred Nelson, Attorney, responded that until the text of the letter were looked at that he could not give the Board a definitive answer. Mr. Nelson said the proposal was to simply make a request, but that under the "Open Meetings Act" that the Board could not do it today. He said that if the Board decided to go forward with making the request that they would have to

prepare a draft (or the staff would prepare a draft) to be considered at the next meeting--where everyone would have a chance to look at it and comment on it. Mr. Nelson said that the Board did have policy making authority, and could issue a request from an annuity. He said that if the Board decided to go forward, the staff would have to draft a document that they could all look at, and then present it at the January 2010 board meeting.

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PUBLIC COMMENTS - CONTINUED:

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VIII. PUBLIC COMMENT

Please refer to Item V. b. and VII. b.

IX. The Next Scheduled Board Meeting: January 12, 2009 (Tuesday), DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah 3:00 – 5:00 P.M. THE BOARD MEETING ADJOURNED AT 4:50 P.M.

- I. Minutes (Board Action Item)**
 - a. Approval of the Minutes from the
December 8, 2009 Board Meeting**

**Public Attendance List
December 8, 2009**

Public Attendance Sheet

Utah Radiation Control

Board Meeting

DEQ Bldg. #2, Conf. Room 101

168 N 1950 W, Salt Lake City, UT 84114-4850

3:00 - 5:00 p.m.

December 8, 2009

Please Print

NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
1. Dan Shrum	Energy Solutions	No
2. THOMAS MAGETTE	ENERGY SOLUTIONS	
3. James O'Neal	private citizen	yes V b and VIII
4. Laura Lockhart	Atty Gen	
5. BPA Thomas	Private Citizen	No
6. Amy Longhe	Desert news	NO
7. Krista Bowers	<u>Concerned</u> citizen	NO
8. Christopher Thomas	HEAL Utah	Yes V. q. q. + b
9. JILL SWEET	Gamma West	—
10. ARTHUR MORRIS	Heal Utah	NOPE
11. Eric Spreng	Heal Utah	No
12. Sandra Hays	private citizen	No
13. Luke Mease	private citizen/UCID	NO
14. Michael Cowley	citizen	Yes
15. CRAIG GALLI	Holland & Hart	probably not
16. Romaine Marshall	" "	No
17. Ed Firmage	self	Yes
18. David Esser	DRC	No
19. Charles Judd	self	Yes VB

— Tom Magette Energy Solutions

Public Attendance Sheet

Utah Radiation Control

Board Meeting

DEQ Bldg. #2, Conf. Room 101

168 N 1950 W, Salt Lake City, UT 84114-4850

3:00 - 5:00 p.m.

December 8, 2009

Please Print

NAME (Please Print)	Organization/Affiliation: Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
20. TADANA MAGETTE	ENERGY SOLUTIONS	(Y)
21. CANDICE FICHES	STUDENT/UIT	N
22. SUE CORTH	SELF	N
23.		
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II. Rules

- a. Request to Extend Public Comment
Period for R313-25-8, Depleted
Uranium Rule (Board Action Item)**

II. Rules

- a. Request to Extend Public
Comment Period for R313-25-8,
Depleted Uranium Rule
(Board Action Item)**

Presentation by EnergySolutions

December 15, 2009

VIA HAND-DELIVERY

Peter A. Jenkins
Chairman of the Radiation Control Board
c/o Department of Environmental Quality
P.O. Box 144810
168 North 1950 West
Salt Lake City, Utah 84114-4810

c/o University of Utah
Department of Radiology
30 North 1900 East
Salt Lake City, UT 84132-2140

Re: Consideration of Rule for Depleted Uranium Disposal

Dear Chairman Jenkins:

On behalf of EnergySolutions, this letter addresses two issues of concern regarding the process for the Board's consideration of the proposed rule for depleted uranium (the "Proposed Rule"): (1) the length of the public comment period, and (2) the lack of a meaningful public hearing.

Comment Period. EnergySolutions respectfully requests that the comment period be extended to 60 days. At the Board meeting on December 8, 2009, there was some discussion about the Board's Statement of Basis for Administrative Rulemaking Regarding Disposal of Significant Quantities of Depleted Uranium ("Statement of Basis") and the amount of time the public should be given to submit comments to the proposed rule on pages 12-13 of the Statement of Basis. The Board concluded that thirty days would be sufficient time for public comment even though the Board's Executive Secretary, Mr. Dane Finerfrock, recommended a 60-day comment period in light of the technically complex nature of the matter under consideration. Neither EnergySolutions nor other members of the public were given an opportunity to provide input to how much time might be needed before the Board ruled on the Proposed Rule.

It is generally presumed that thirty days is sufficient time for the public to have a *full and fair opportunity* to comment on proposed rules. However, this is not generally the case for matters with the complexity of the Proposed Rule. Although one Board member noted that a short comment period was reasonable because those members of the public likely to comment

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Aspen Boulder Carson City Colorado Springs Denver Denver Tech Center Billings Boise Cheyenne Jackson Hole Las Vegas Reno Salt Lake City Santa Fe Washington, D.C. ☎

HOLLAND & HART



already knew what they were going to say, providing comments on the Proposed Rule is not so simple as merely submitting some previously crafted opinion. We have only recently obtained and received the Statement of Basis, and it is clear that there are many incorrect factual and legal assertions as well as technical questions that must be addressed during the comment period. Properly addressing these flaws is important and will require significant resources and time.

EnergySolutions will be prejudiced by the Board's decision to allow only a 30-day comment period and therefore we strongly recommend that the Board extend the public comment period an additional 30 days, to 60 days, as suggested by the Executive Secretary. Otherwise the comments prepared in the 30 day comment period will only be superficial, and will not address the complex rulemaking being undertaken by the Board.

Lack of Hearing. The Board failed to account for Utah Code Ann. § 19-3-104(9)(a) which provides that before adopting a state rule more stringent than its federal counterpart, there must be public comment and a meaningful *hearing*, followed by a finding "based on evidence in the record that corresponding federal regulations are not adequate to protect public health and the environment of the state." *EnergySolutions* believes that the Board would benefit from such a hearing which would enable the licensee, *EnergySolutions*, sufficient time to present technical information and points of law to the Board and for the Board to ask questions. Additionally, the members of the general public also should be allowed adequate time to present their case. We therefore suggest that a minimum of one day be set aside for presentations by *EnergySolutions* and other interested parties.

Thank you for your consideration of these important issues relating to the Proposed Rule. Please let me know if you have any questions or concerns.

Sincerely yours,

Craig D. Galli

CDG:bwt

cc: Dane Finerfrock (Executive Secretary of the Utah Division of Radiation Control)
Fred Nelson (Counsel for the Board)
Laura Lockhart (Counsel for the Division)
Dan Shrum (*EnergySolutions*)
Thomas Magette (*EnergySolutions*)
James A. Holtkamp (H&H)

II. Rules

- b. Proposed Rule to Prohibit
Blended Wastes
(Board Action Item)**

**Christian K. Gardner
– Handout During Meeting –**

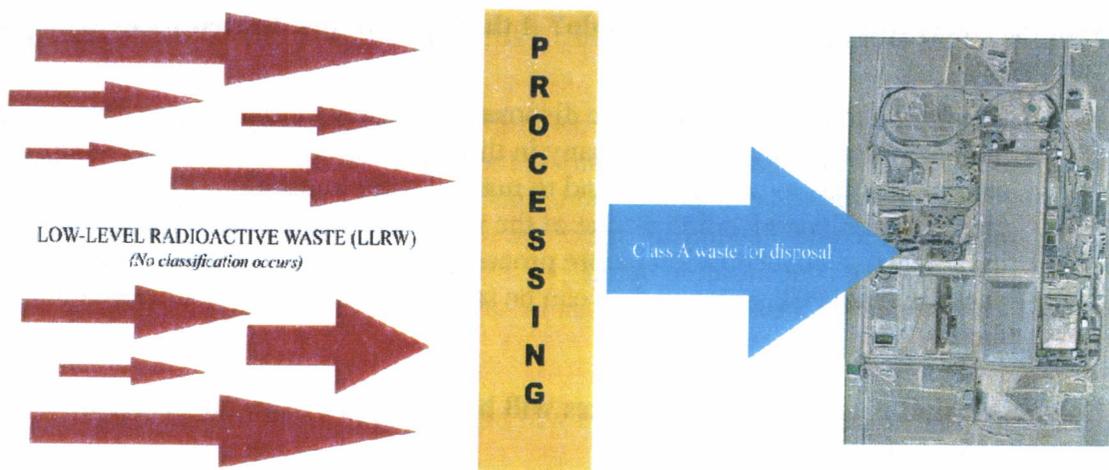
Blending of Low-Level Radioactive Waste

What exactly is blending of radioactive waste?

Blending is the mixing of two or more batches of radioactive material that contain differing amounts of radioactivity. The end product is also contaminated with radioactivity and requires proper management, including disposal in a licensed site.

Isn't blending just dilution?

No. As the NRC has made clear, dilution is the intentional mixing of *clean* material with radioactive material in order to reduce the concentration of the radioactivity. That would result in an increase in the overall amount of contaminated material. Because blending involves mixing radioactive material with other radioactive material, there is no increase in waste volume. Here is a simplified way to look at blending.



Why would anyone want to blend radioactive waste?

Blending is just one component of an overall waste management strategy, and provides several tangible benefits. A properly designed blending program can:

- Reduce radiation doses to workers
- Improve the operational efficiency of nuclear power plants
- Provide disposal options where none would otherwise be available
- Optimize life cycle cost
- Reduce interim storage of LLW

So what's the big deal? Why would anyone care?

Blending raises issues that are related to what is known as "waste classification." Low-level radioactive waste, or LLW, has to be classified for disposal as either A, B, or C, with A being the least hazardous. Blending can result in waste that might have been B or C being classified as A.

So does that mean that blending is a way to get around the regulations that protect us from the more hazardous waste?

No, not at all. The same type of radioactive material can be contained in any Class of LLW, be it A, B, or C. It is the *concentration* of radioactive material that determines waste classification. Blending doesn't change the nature of the material or the characteristics of the atoms, it just changes the concentration. There is no different material or constituent that makes something Class B or C waste rather than Class A waste. It is just having more of the same thing that results in the higher classification.

Why does it matter if there is more or less waste in any Class?

In 2008, The Barnwell Disposal Facility was closed to waste outside of the Atlantic Compact, which left 36 states with no place to safely dispose of Class B or C waste. This is particularly a problem for wastes known as resins, which result from cleaning the water used in nuclear power plants.

What is EnergySolutions planning to do? I thought you just buried waste from other companies.

In addition to operating the Clive disposal site, EnergySolutions processes more radioactive waste than any company in the United States. We do this to reduce the amount that has to be disposed and to make it safer to handle. We are designing a facility to include blending as one of the ways we process resins. These resins will vary in radioactive concentration before processing, but the new facility will produce a waste package that is Class A and thus can be safely and permanently disposed in our licensed facility.

So doesn't that mean that B & C wastes will be coming to Utah for disposal? I thought that was against the law.

No B or C waste will come to Utah for disposal. The suggestion that blending provides a way for B or C waste to slip into Utah through the back door is based on a misunderstanding about how LLW is classified. Remember, it is the *concentration* of radioactive material that determines waste classification.

I heard that generators of LLW have to classify the waste before they ship it. How can waste classification change after they ship it?

NRC regulations require that waste be classified for *disposal*, and they explicitly exempt classification of waste being shipped to processors. This is because processing waste can change the waste classification. Some examples of waste processing are:

- Dewatering – removes mass (water)
- Compaction – reduces volume
- Consolidating resins from multiple vessels in one larger disposal container
- Thermal Processing – removes mass and volume

Each of these changes in mass or volume will cause a change in the *concentration* of the radioactivity, and may change the classification, too. In addition, the final burial container must be considered in classifying waste, so classification cannot occur until the material is processed and ready for disposal.

What does the NRC think about blending?

NRC regulations do not specifically encourage or discourage blending. The NRC recently issued several letters that clarify their guidance on the topic of blending. These letters all have made clear that under the proper circumstances blending is permitted under their regulations.

But isn't the NRC in the process of changing their position on blending?

No. Because of the recent increase in interest in the topic, the Chairman of the Commission recently asked the NRC staff to write a paper to address intentional blending and make recommendations, if necessary, for revisions to current regulations or guidance.

III. Rules

- c. **Presentation on Waste
Blending by
EnergySolutions
(Board Information Item)**

**Presentation by
EnergySolutions**

– **Handout During Meeting** –



- V. **Radioactive Waste Disposal**
 - b. **Governor's and DOE Agreement on DU Disposal (Board Information Item)**

Amanda Smith, DEQ Department Director

**Copy of Letter from Governor Herbert
To the U.S. Department of Energy**



GARY R. HERBERT
GOVERNOR

STATE OF UTAH
OFFICE OF THE GOVERNOR

GREG BELL
LIEUTENANT GOVERNOR

December 15, 2009

U.S. Department of Energy
Secretary Steven Chu
1000 Independence Ave., SW
Washington, DC 20585

Dear Dr. Chu,

It is my understanding that an initial shipment of some 3,500 tons of depleted uranium (DU) is en route to Utah from DOE's Savannah River site in South Carolina. State officials received notice of this development late last week, just days before shipment of the material began.

The shipment, expected to arrive in Utah sometime next week, is apparently the first of several shipments of DU intended to be stored at a private waste storage facility owned by EnergySolutions in Clive, Utah.

As you know, the State of Utah's Radiation Control Board is engaged in a rule-making process that would require a performance assessment prior to accepting additional DU at the Clive facility.

Last week, I reaffirmed my call for a technical study of proper disposal methods for DU. As you know, this is a highly technical issue and one that my Radiation Control Board has been grappling with for nearly six months. I have allowed the experts to fully vet this issue by gathering additional scientific information and accept public comment on the matter.

Unfortunately, the Department of Energy's decision to initiate transport of up to 14,000 tons of DU has circumvented our important state processes. I am disappointed that these shipments, which were not expected to begin until spring, are now coming before our rule-making process is complete.

It is only prudent that there be further study to determine how this waste is best stored *before* we accept it into the State of Utah. As a scientist yourself, I know you can appreciate that good public policy requires good science, and I am concerned that DOE's decision to ship this waste to Utah now is based more on politics than on science.

As Governor, my duty is to ensure the public health and safety of all Utahns. As such, I ask that you immediately halt this and any future DU shipments from the Savannah River site until Utah completes its rule-making process.

Thank you for your consideration, and your service on behalf of Utah and the entire United States of America.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary R. Herbert", with a long horizontal stroke extending to the right.

Gary R. Herbert
Governor

- V. **Radioactive Waste Disposal**
 - b. **Governor's and DOE Agreement on DU Disposal**
(Board Information Item)

**Dane Finerfrock – DRC Comments to the
U.S. NRC Stakeholder Meeting on Waste
Blending – January 12, 2010**



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF RADIATION CONTROL
Dane L. Finerfrock
Director

Comments for the Nuclear Regulatory Commission Stakeholder Meeting on Waste Blending
January 12, 2010

1. Utah is opposed to waste blending as the intent is to alter the waste classification for the purposes of disposal site access.
2. Important matters dealing with waste blending, such as prohibition of certain practices, currently in guidance should be put into regulation. Blending issues transcend State boundaries not only because of access to limited disposal sites but because waste processors and individual generators are located throughout the Country. As a State with a commercial disposal site that accepts only Class A radioactive waste, it is important to recognize that if blending occurs, it occurs before receipt at the disposal site and enforcement of waste blending regulations is most meaningfully accomplished away from the disposal site.
3. We concur with the NRC that dilution of radioactive wastes with uncontaminated materials should be explicitly prohibited.
4. If some waste blending is found acceptable, the NRC should specify through a performance based rule, the criteria to blend wastes. The regulation may rely on homogeneity, concentration factors, etc. between blended waste streams. The NRC should specify, by rule, the minimum sampling and radiological characterization standards when assigning classification with respect to blending.
5. The NRC has stated that waste blending is becoming an important issue because access to disposal sites is limited. Except for the disposal of sealed sources, there are no known Utah licensees who generate a waste stream that is other than Class A waste. Therefore, the closure of the Barnwell, South Carolina site to out of compact waste does not negatively impact any Utah licensees. Utah licensees with low-level radioactive waste have access to the US Ecology site in Richland, Washington. The Richland disposal site is permitted for Class A, B, and C low-level radioactive waste.
6. Title 10 CFR Part 20, Appendix G, Subpart I (C)(12), states that classification is required for wastes consigned to a disposal site. The NRC should expand this rule to explicitly specify who has the obligation to classify wastes and when.

- VII. Other Division Issues**
 - a. Quarterly and Monthly Update
(Board Information Item)**



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF RADIATION CONTROL
Dane L. Finerfrock
Director

Division of Radiation Control
Activities Report Summary

December, 2009 Violations assigned a Severity Level I, II or III or where a Monetary Penalty has been imposed.

Denison Mines:

An NOV was issued on 1/15/09 by the Co-Executive Secretary after a field inspection of groundwater sampling on 12/9/08. A single violation was identified: failure to use a flow cell to measure field parameters during groundwater sampling. To resolve the violation, a Settlement Agreement was signed by both parties on 11/3/09, and penalty of \$3,599.91 paid.

An NOV was issued on 4/21/09 by the Co-Executive Secretary after review of the 4th Qtr, 2008 GW Report. Three violations were identified; failure to: 1) Report all well monitoring and samples collected, 2) Provide chain of custody for the July and September, 2008 sampling events, and 3) Provide a water table contour map prepared with contemporaneous groundwater elevation data. Penalties were pursued for Violations 1 and 3. To resolve them, a Settlement Agreement was signed by both parties on 11/3/09, and a penalty of \$4,815 paid.

4th Quarter, 2009

X-Ray Program

Current Registrations: 2557, an increase of 23 registrants since last quarter.
Inspections conducted: 142
Inspections conducted by Qualified Experts: 46

Radioactive Materials Program

Current Licensees: 195 representing 181 licensees, a decrease of 1 license and 1 licensee.
Radioactive materials inspections: 17
No new licenses were issued, 15 licenses were renewed and 15 license amendments were completed.

Low-Level Radioactive Waste Program

Twenty inspections were conducted at EnergySolutions in the following areas: 4-engineering construction, 2-ground water, 6- materials, equipment and conveyance release and 8-general radiation safety inspections.

Uranium Mill Program

Eleven inspections were conducted at the uranium mills including: 6-Denison Mines, 3-Uranium One and 2- Rio Algom.

Generator Site Access Permit

Approximately one thousand manifests were audited and one hundred twenty-two radiation surveys of conveyances were performed.